



INDUSTRY COMMISSION
SUBMISSION TO THE
NSW DAIRY INDUSTRY REVIEW

June 1997

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Forming the Productivity Commission

The Industry Commission, the former Bureau of Industry Economics and the Economic Planning Advisory Commission have amalgamated on an administrative basis to prepare for the formation of the Productivity Commission. Legislation formally establishing the new Commission is before Parliament.

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GLOSSARY

Effective rate of assistance	Assistance provided to an industry's value added. It is equal to the percentage increase in unit value added, after accounting for the benefits of assistance on both outputs and inputs, and the tax effect of any tariffs and other policy-induced cost imposts on inputs.
Farm-gate	Point at which milk leaves a dairy farm for processing, manufacturing and vending. Hence, farm-gate controls are controls imposed on milk production up to the point at which it leaves the farm.
Manufacturing milk	Milk used to produce manufactured dairy products such as cheese, butter and yoghurt.
Market milk	Milk processed into wholemilk, low fat, modified, flavoured and UHT milks for drinking. It is also referred to in this report as fresh milk and drinking milk.
Nominal rate of assistance	Assistance provided to an industry's outputs. It is equal to the percentage increase in gross per unit returns attributable to that assistance.
Post farm-gate controls	Controls imposed on the processing, manufacturing and vending of milk.
Quota	An administrative instrument entitling a farmer to supply market milk at a given time of the year.

OVERVIEW

Dairy farming is one of Australia's and New South Wales' more important rural activities. Total Australian milk production is worth around \$3 billion each year, of which New South Wales contributes \$450 million. This milk is either processed into drinking (market) milk, or used to manufacture dairy products. Australia exports close to \$2 billion of dairy products each year.

Dairy farming is also one of Australia's most highly assisted activities. In recent years, the nominal rate of assistance for milk production has been as high as nine times the average for agriculture as a whole. Assistance to drinking milk production has also been increasing, in contrast to declining assistance elsewhere in the economy. In dollar terms, Australian consumers pay the equivalent of a \$500 million per year tax on milk and dairy products to support dairy farmers.

About \$380 million of this tax is attributable to state government regulations that fix the price paid to farmers for drinking milk. In New South Wales alone, the tax on drinking milk is around \$130 million per year, or around 20 cents per litre. A range of associated restrictions on farm production and supply prevents competition amongst dairy farmers undercutting the regulated farm-gate price.

These controls are central to this review, which is part of the New South Wales Government's commitments under the Competition Principles Agreement. Under that agreement, all Australian governments have undertaken to reform anti-competitive legislation unless:

- the benefits to the community as a whole from the restriction of competition more than outweigh the costs; and
- restrictions on competition are the only way to realise those benefits.

In this context, 'the community as a whole' refers to the Australian community, not just to New South Wales. This is significant as the New South Wales controls include restraints on interstate trade in drinking milk that have effects extending beyond the state's borders.

Do the controls provide any significant community-wide benefits?

A long standing rationale for regulating the farm-gate price of drinking milk is to ensure continuity of supply and stable prices. Implicit in the latter is the

presumption that consumers would resent fluctuations — down as well as up — in milk prices.

Because the cost of producing milk varies over the year, deregulation could lead to seasonal variations in milk prices. This would be no different to variations in the price of meat, vegetables and the like. For these staples, variation in prices, rather than regulation, is the means of ensuring year round supply. At those times of the year when production costs are higher, or when produce must be transported from more far flung regions, prices rise. When production costs are lower and supply more plentiful, prices fall.

But it is not clear why some variation in milk prices should be a problem for consumers, especially given that abolition of the current controls could see the average price over the whole year fall by as much as 20 cents per litre. Indeed, even at those times of the year when milk production costs are at their highest, retail prices would still be below the current regulated price.

An extension, albeit extreme, of the proposition that consumers prefer stable but much higher milk prices would be to suggest that consumers would prefer that retailers did not offer specials on staple grocery lines. Moreover, if there was significant consumer resistance to variable milk prices, retailers could smooth prices by, for example, entering into price stabilising contracts with processors. In that event, stability would be maintained — and at a lower average price than at present.

An apparently more significant argument for the current controls is a perceived need to offset the market power of the large food retailers. There is a widespread perception that, without such countervailing regulation, farmers would be at the mercy of the major retailers.

But there is a range of other market and regulatory protections for dairy farmers:

- Farmers cooperatively own many of the significant manufacturers of dairy products. In the event that food retailers reduced prices for drinking milk to unreasonable levels, farmers could instead sell their milk to these manufacturers. This alternative outlet for milk production puts a floor in returns to farmers for drinking milk.
- The Trade Practices Act contains general sanctions against the misuse of market power. Producers in any industry, including dairy farming, can take action under this Act.
- Competition in the food retailing industry for the consumer dollar is intense, as evidenced by recent Australian Competition and Consumer Commission approvals for mergers in the industry. Competition between

retailers to secure the milk necessary to meet consumer demand will constrain them in squeezing margins to farmers unduly.

Another argument for the current controls is to offset government subsidies to dairy farmers in other countries. These subsidies reduce export returns for Australian farmers.

However, there is little that Australia can do in isolation to counter the policies of other governments. It makes little economic sense for Australia to try and match substantial and longstanding subsidies provided to overseas farmers by taxing its milk consumers. A better approach is to join with other countries who are adversely affected by these subsidies and push for reforms in multilateral trade negotiations. This approach has already had some success.

A final argument for the current farm-gate controls is to support regional development. Implicit in this argument is the view that an across-the-board tax on drinking milk to subsidise dairy farmers' incomes is an effective way of helping 'needy' regions.

However, the current controls are an imprecise way of pursuing regional objectives:

- The benefits to individual regions are variable. Some regions have benefited from both higher prices and greater milk production. In others, reduced levels of production have partly offset the benefits of higher prices.
- The size of the benefits to individual dairy regions is not related to the economic health of those regions.
- By raising dairy farmers' incomes, the current controls raise the price of farm land. This penalises other rural activities in these regions.

Thus, if the New South Wales Government wishes to support particular dairy regions, the Commission considers that it should do so explicitly and transparently, and in a way that gives equal encouragement to all activities in those regions.

The costs of the current arrangements

For many, the \$130 million per year tax on New South Wales milk consumers would be sufficient reason to deregulate the current farm-gate controls. It is spurious to suggest that price increases in some states following the removal of controls on milk processing and vending means that abolishing farm-gate controls would also see prices rise. Experience in other rural industries, and the fact that dairy farmers are prepared to pay considerable sums of money to

obtain the right to supply the lucrative fresh milk market, lead inexorably to the conclusion that the current controls are costing consumers dearly.

But higher milk prices are not the only cost:

- The quota system used to restrict market milk supplies and keep prices up is complex and prescriptive, placing a number of restrictions on the use of quota and its transfer between farmers and regions. This means that, within New South Wales, production does not always occur in the lowest cost locations, thereby increasing the resource cost of meeting the state's milk requirements.
- By contributing to an inappropriate distribution of milk production across states, the New South Wales controls have efficiency costs for Australia as a whole.

The difficulty of quantifying these costs is not to downplay their significance. Nor is it reasonable to argue that the controls are primarily a tax on consumers which have relatively low efficiency costs. Even if a tax on milk is an efficient way of raising revenue, there is no prima facie reason why that revenue should be used to boost dairy farmers' incomes.

The farm-gate controls should be abolished

Given these costs and the absence of significant wider community benefits, the Commission can see no reason to retain the New South Wales farm-gate controls for market milk. Changes in this area need have no implications for the health and safety and quality assurance controls that are also under review in this exercise.

In the Commission's view, the key issue should not be whether to deregulate the farm-gate controls, but how to deregulate in order to minimise adjustment costs. This could involve a phased relaxation of pricing and production regulations, or a period of grace before deregulation occurs. A continuation of the productivity gains achieved in the industry in recent years would help it to cope with removal of the controls.

1 INTRODUCTION

1.1 What is the Review about?

The New South Wales Government has initiated a review of the state's regulatory arrangements for the dairy industry. A panel comprising state government and dairy industry representatives is undertaking the review.

The review is looking at those sections of the New South Wales *Dairy Industry Act 1979* that regulate the supply and pricing of market milk up to the 'farm-gate' and that provide the basis for the health and safety, quality assurance and industry service functions of the New South Wales Dairy Corporation. The review panel will report to the New South Wales Government by the end of September.

The review is being undertaken in accordance with the Competition Principles Agreement, signed by all Australian governments in April 1995. Amongst other things, the agreement commits governments to a program of legislative review and reform. The guiding principle is that legislation should not restrict competition unless:

- the benefits of the restriction to the community outweigh the costs; and
- the objectives of the legislation can only be achieved by restricting competition.

Governments have agreed to reform anti-competitive legislation that cannot be justified on these grounds by 2000. In assessing the benefits and costs of such legislation, governments are required to take into account a range of economic, social and environmental considerations.

1.2 Why is the Commission making a submission?

The Commission has previously undertaken two major reviews of dairy industry arrangements, the most recent being in 1991 (IAC 1983; IC 1991b). In its Annual Reports, the Commission also publishes ongoing estimates of assistance provided to the industry by the various Commonwealth and state dairy regulations.

In the light of this work, the review panel wrote to the Commission requesting it to make a submission (see appendix A). Amongst other things, the panel

requested information on the magnitude of assistance to the dairy industry at both the national and state level and the methodology used in the calculations.

More generally, as the major independent advisory body on industry policy in Australia, the Commission is keen to contribute to the development of future policy for a significant, but highly regulated and assisted, activity. As the first of the scheduled reviews of state dairy arrangements, the Commission sees this exercise as being particularly important.

1.3 Approach taken in the submission

This submission concentrates on the rationales for, and the effects of, New South Wales production and pricing controls for market milk. It does not assess the health and safety, quality assurance and industry service functions of the New South Wales Dairy Corporation.

In making this submission, the Commission is keen to focus attention on the broad issue of whether the current pricing and production controls provide a net benefit to the community as a whole. As the submission makes clear, this raises issues extending beyond New South Wales borders. For example, one important issue is whether the New South Wales controls have detracted from an appropriate distribution of milk production across states.

The Commission's assistance estimates provide one indication of the costs to the community of the current controls. In response to the request from the review panel, chapter 4 of this submission is devoted to assistance issues.

However, experience in this and other industries points to the potential for unproductive and time-consuming debate about the assistance estimates. As set out in chapter 4, whatever the precise magnitudes, there can be no dispute that the current arrangements provide generous assistance to dairying in comparison to that available to most other Australian industries. Consumers ultimately bear the costs of this assistance in the form of higher milk prices.

Hence, as discussed in chapter 5, the key policy issue is whether dairying has special attributes that would warrant continuation of this generous support.

In preparing this submission, the Commission drew heavily on its previous work on the dairy industry. However, to bring itself up to date with recent developments and issues, it held helpful discussions with the Australian Dairy Corporation and the New South Wales Department of Agriculture.

2 THE AUSTRALIAN AND NEW SOUTH WALES DAIRY INDUSTRIES

Dairy farming is Australia's fourth largest rural industry, behind wheat, beef and wool. Downstream activities — milk processing and dairy manufacturing — are also important Australian industries.

This chapter provides an overview of the Australian and New South Wales dairy industries as a backdrop to the subsequent assessment of the benefits and costs of the New South Wales dairy regulations. Most of the statistics in this and subsequent chapters come from the Australian Dairy Corporation's *Dairy Compendium 96* (ADC 1996).

2.1 Production, exports and imports

The Australian dairy industry supplies fresh milk for local consumption and milk for use in manufactured dairy products for both the domestic and export markets.

Production

Raw milk is used as either 'market milk' or 'manufacturing milk'. Market milk is processed into fresh (drinking) milk, while manufacturing milk is used in the production of manufactured dairy products such as cheese, butter, yoghurt and milk powders.

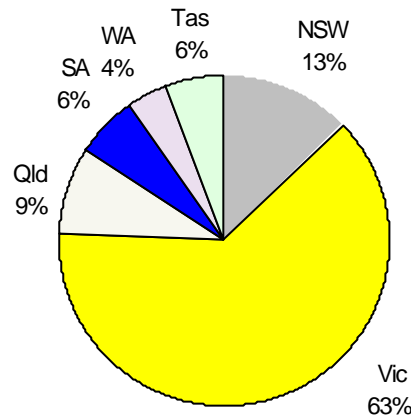
In 1995–96, the ex-factory value of Australia's processed milk and dairy products was about \$6.5 billion. The gross farm-gate value of the milk input to that production was \$2.9 billion. In volume terms, total milk production is currently close to 9 billion litres per year.

The majority of Australia's milk (63 per cent) is produced in Victoria. New South Wales is the second largest producer, accounting for 13 per cent of total milk output (see figure 2.1).

The New South Wales dairy industry is the fifth largest rural industry in the state. In 1995–96, its gross value of milk production was about \$450 million, with the ex-factory value of processed milk and dairy products being approximately \$1.4 billion.

About half of the 1.1 billion litres of milk produced in New South Wales is consumed as fresh milk. This is a similar percentage to Queensland and Western Australia. In contrast, the majority of milk produced in Victoria, South Australia and Tasmania is used in manufactured dairy products (see figure 2.2). Total market milk production in Australia is around 1.9 billion litres per year or 22 per cent of overall milk production.

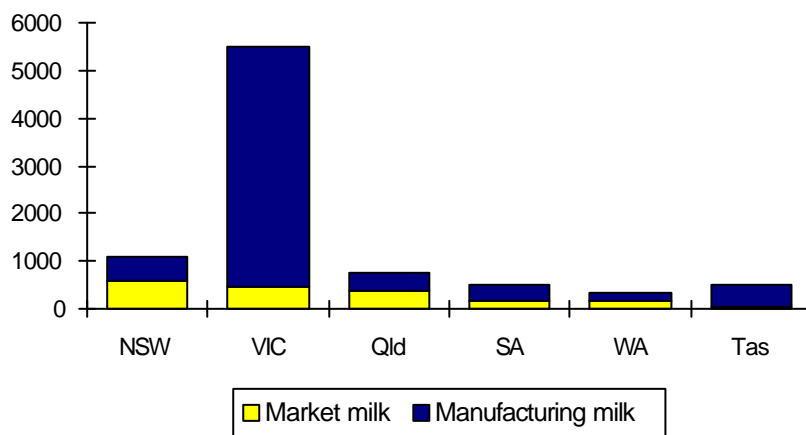
Figure 2.1: Australian milk production by state, 1995–96 (per cent)



Total for Australia: 8716 million litres

Source: ADC (1996)

Figure 2.2: Volume of market milk and manufacturing milk by state, 1995–96 (millions of litres)



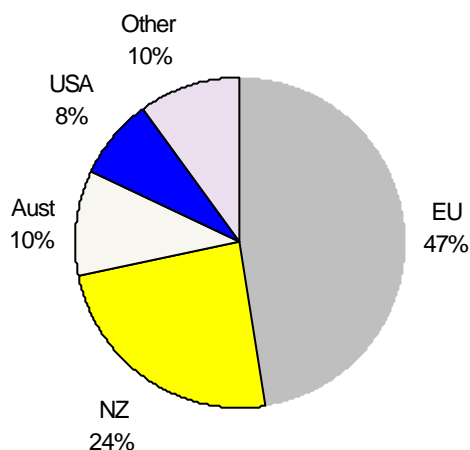
Source: ADC (1996)

Exports

By world standards, Australia is a small milk producer, but a significant exporter. In 1995–96, Australia produced two per cent of world milk yet accounted for 10 per cent of world milk export sales. These exports, valued at around \$1.8 billion, accounted for about 45 per cent by volume of Australia's total milk product.

Australia is the third largest exporter of milk products, behind the European Union and New Zealand (see figure 2.3). (Although the European Union is the largest exporter, those exports depend on heavy government support to producers).

Figure 2.3: Exporters' shares^a of the international market, 1995–96 (per cent)

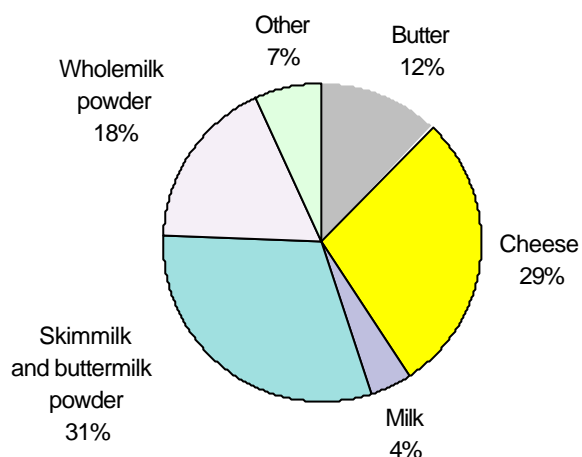


a Measured in volume terms.

Source: ADC (1996)

About 80 per cent of Australia's dairy exports are sold in Asia. Within Asia, the key markets include Japan, the Philippines, Malaysia, Thailand, Taiwan, Singapore and Indonesia. Australia's principal dairy exports are skimmilk powder, buttermilk powder, wholemilk powder, cheese and butter (see figure 2.4). Exports of milk and short shelf life products to the closer Asian markets are also increasing.

Figure 2.4: Australian export shares^a by product type, 1995–96
(per cent)



a Measured as the share of the \$A value of milk products.

Source: ADC (1996)

Imports

Australia imports only small quantities of most manufactured dairy products. The notable exception is cheese, with imports accounting for 17 per cent of domestic market sales. Other imports include butter, milk powders, whey and casein. Over 50 per cent of imports originate from New Zealand, with the remainder sourced from Europe.

2.2 Dairy farming

At a more disaggregate level, the dairy industry consists of four distinct sectors: the production of milk on dairy farms — the focus of this inquiry, processing, manufacturing and vending. Box 2.1 provides a brief overview of the ‘post farm-gate’ sectors.

Box 2.1: The dairy industry post farm-gate**Processing for the fresh milk market**

Because of its perishable nature, milk for the fresh milk market requires immediate processing. Processing involves milk pasteurising and packaging. In most states, dairy processing is highly concentrated, with processors also involved in the manufacture of dairy products. Many of the major processors and manufacturers are cooperatively-owned by dairy farmers.

As in the rest of Australia, merger activity in New South Wales over the last decade has seen the emergence of a small number of large processing/manufacturing companies. For example, in 1989, Dairy Farmers, the Hunter Valley Cooperative and Shoalhaven Co-operative merged to form Australian Co-operative Foods, which in 1996 merged with Queensco-Unity Dairyfoods Co-operative Association Ltd. Currently, nine companies (predominantly cooperatives) operate receipt and/or processing factories in New South Wales.

Dairy manufacturing

Dairy manufacturing involves the transformation of wholemilk into short-life products such as yoghurt, custard, cream, ice cream and fresh cheese, and long-life products such as cheese, butter, milk powders and UHT milk. Manufacturing primarily occurs in Victoria, South Australia and Tasmania.

The mix of manufactured dairy products has changed substantially in recent years in response to changes in dietary behaviour and international market opportunities. Cheese, wholemilk powder and yoghurt have increased their share of production at the expense of butter and casein. The range of cheeses and yoghurts produced in Australia has also increased.

Distribution and vending

Vendors distribute market milk from processors to supermarkets, convenience stores and homes. Large vendors are supplied from the processing plant while smaller vendors are supplied from depots. Distribution does not usually occur across state borders because of regulations designed to limit interstate trade (see chapter 3). In 1995–96, there were more than 1400 registered milk vendors in New South Wales.

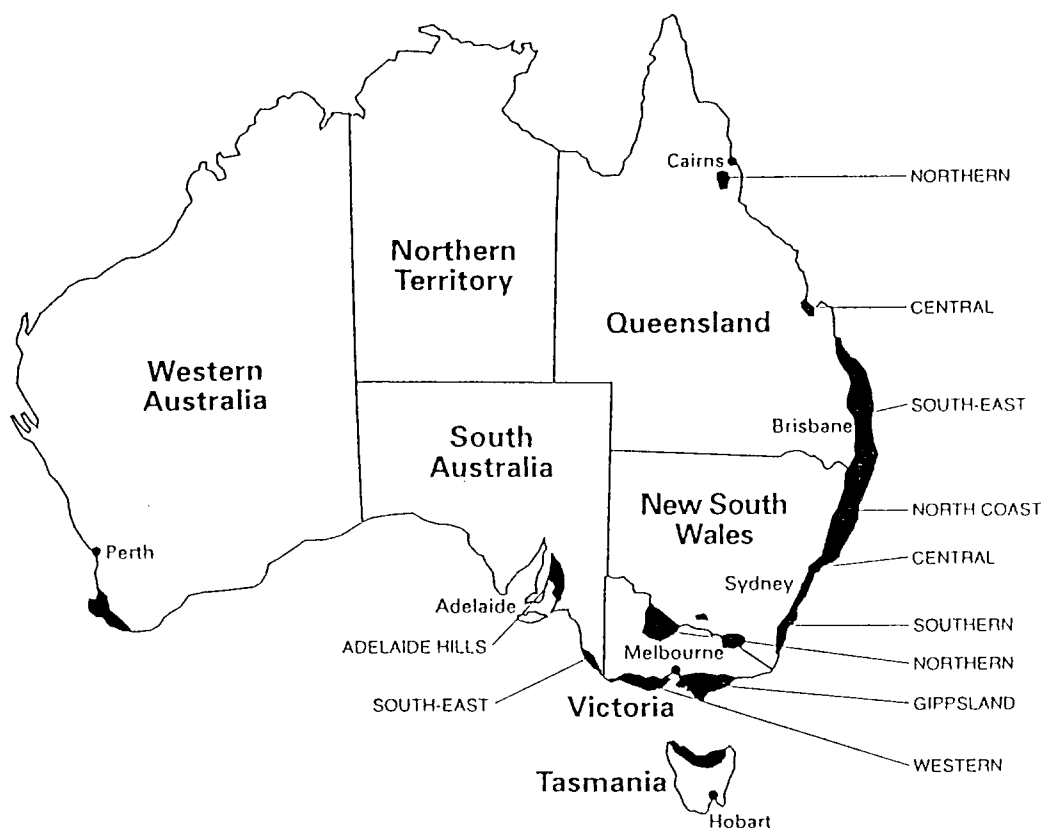
In the past, distribution as well as processing and manufacturing have been subject to extensive state regulation. However, all states have, or soon will have, deregulated the industry beyond the farm-gate (see chapter 3).

Location

Dairy farming in Australia is pasture-based, with supplementary feeding required in the winter. Most dairy production is located in the high rainfall, coastal fringes (see figure 2.5). Production in northern Victoria, the Riverina and parts of Western Australia and Tasmania is dependent on irrigation.

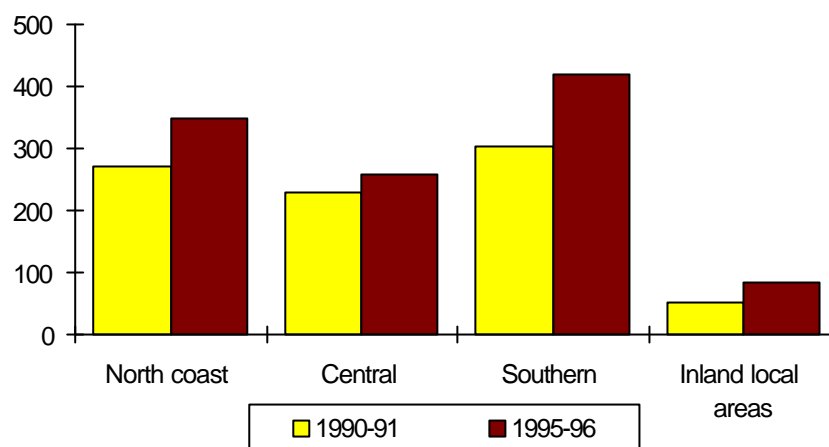
In New South Wales, milk production is concentrated in the north coast, southern and central regions. In recent years, output has increased in all of these regions (see figure 2.6).

Figure 2.5: Major dairy regions, Australia



Source: ADC (1996)

Figure 2.6: New South Wales milk production, 1990–91 and 1995–96 (millions of litres)



Source: New South Wales Government (1997)

Productivity

Milk production per cow in New South Wales increased by nearly 30 per cent between 1990–91 and 1995–96 (see table 2.1). Some of this increase in milk yields presumably reflected ongoing genetic developments and improvements in farm practices. However, with yields rising at more than double the rate in the previous decade (IC 1991b, p. 8), other factors were also at work. In particular, the commencement of this period of high productivity growth coincided with the introduction of trade in market milk quotas (see chapter 3). Quota transfers have resulted in a relocation of production to higher yielding farms able to produce milk at a lower cost. Such industry rationalisation is reflected in a declining number of dairy farms and an increase in average farm size (see table 2.1).

Profitability

In recent years, the average farm cash income, profitability and rate of return for dairy farming in both New South Wales and Australia have been higher than the average for broadacre farming (see table 2.2).

However, at less than 5 per cent on average, rates of return to dairy farming are quite low, and significantly below the rates of up to 25 per cent reported in the late 1970s. And while nearly all New South Wales dairy farmers had positive cash incomes in 1996–97, over a third recorded negative business profits.

Table 2.1: Dairy farm statistics, New South Wales

	1990–91	1995–96
Number of dairy farms	2 056	1 853
Average farm size (HA)	203	247
Average herd size	106	109
Total production (million litres)	854	1 111
Average production per cow (litres)	3 712	4 749
Average production per farm (litres)	415 487	599 618

Source: New South Wales Government (1997) and ADC (1996)

Table 2.2: Financial performance, all broadacre farms and dairy farms, Australia and New South Wales (average per farm^{a,b})

	<i>All broadacre</i>			<i>Dairy</i>		
	1994–95	1995–96	1996–97	1994–95	1995–96	1996–97
Australia						
Cash income (\$)	39 925	50 520 (5)	47 100	49 577	63 940 (5)	62 100
Business profit (\$)	-13 538	11 040 (23)	-1 400	-4 278	14 220 (24)	9 900
Rate of return (%) ^c	2.3	3.8 (11)	na	2.7	4.7 (10)	na
New South Wales						
Cash income (\$)	34 761	45 750 (10)	53 400	56 758	68 740 (10)	79 200
Business profit (\$)	-28 525	6 700 (80)	6 700	1 996	21 700 (34)	31 600
Rate of return (%) ^c	0.3	3.3 (25)	na	4.7	3.9 (19)	na

a 1994–95 estimates are final estimates, 1995–96 estimates are preliminary estimates and 1996–97 estimates are provisional estimates.

b Figures in parentheses for 1995–96 represent relative standard errors. These are indicative of standard errors for 1994–95 and 1996–97. In general, the smaller the error the more reliable the estimate.

c Nominal rate of return including capital appreciation.

Source: ABARE (1997a)

Relatively low rates of return could be construed as inconsistent with the Commission's arguments that the state market milk controls provide significant benefits to dairy farmers (see later discussion).

But, as in any industry, care must be taken in interpreting financial figures. Profits in the agricultural sector often translate into higher land values. This increases farmers' asset bases and hence reduces measured rates of return. Moreover, in the dairy industry, much of the benefit to farmers of the current controls is reflected in the value of market milk quotas (see chapter 3). The Commission understands that ABARE's rate of return estimates for the dairy industry include a value for quota in the capital base. This will also operate to reduce measured rates of return. In sum, significant benefits to dairy farmers from the assistance regime and measured low rates of return in the dairy sector need not be at odds.

Seasonality of milk production

Australia's pasture-based system of milk production is highly seasonal. A cow produces its maximum level of milk six weeks after calving and farmers coordinate breeding with pasture growth in order to maximise output and minimise costs. As a result, milk yields peak in October/November and are relatively low in the winter months. However, seasonal yields vary substantially across states.

Although milk production is seasonal, consumer demand for fresh milk is relatively stable. To meet this demand, farmers must manage calving and use supplementary feeding in the winter months. This entails higher production costs. However, these costs are more than covered by the regulated market milk prices paid to farmers by state dairy authorities (see chapter 3).

Industry organisations

There are a number of national and state industry bodies representing the interests of the dairy industry.

The peak body is the ADC, which is responsible for domestic and export marketing. The ADC's other functions include market analysis and management of the domestic market support scheme for manufacturing milk (see box 3.1).

At the state level, the New South Wales Dairy Corporation is a statutory body responsible for the regulation and control of milk from farm-gate to consumers and the production, quality and storage of dairy products in the interests of public health.

2.3 Overseas outlook

The international dairy market is subject to extensive (and well documented) government intervention, particularly by the European Union. This restricts Australia's access to overseas markets and lowers our export returns. Also, competition in export markets from New Zealand and United States dairy products is expected to increase in the future.

Nevertheless, the medium term outlook for the Australian dairy industry is strong. ABARE (1997b) forecasts that the value of Australian exports will rise in real terms from \$1.5 billion in 1995–96 to \$2.9 billion in 2001–02. This expected growth reflects a number of factors:

- Demand for dairy products is increasing, particularly in South East and East Asia markets which Australia is well placed to supply.
- Australian exporters are benefiting from World Trade Organisation agreements that require overseas governments to reduce their support for dairy farmers. Such reductions in support will contribute to an expected increase in export prices in coming years.
- Productivity improvements in the domestic industry have increased the competitiveness of our exports.

3 CURRENT ASSISTANCE ARRANGEMENTS

Both Commonwealth and state governments regulate the Australian dairy industry. The main objectives of this regulation are to ensure year round supply of fresh milk at stable prices, guarantee public health and milk quality standards, and increase returns to dairy farmers.

This submission focuses on state government regulations controlling the supply and pricing of market milk up to the farm-gate and their interaction with Commonwealth support for the production of manufacturing milk. Some other forms of government involvement in the industry are briefly noted in box 3.1.

3.1 State support for market milk production

Historically, the states have regulated most aspects of the market milk sector, from farm to final consumer. While public health and security and stability of supply have often been the nominated reasons for such regulations, industry assistance and regional considerations have also loomed large.

In recent years, state government involvement in the processing, vending and retailing sectors has greatly diminished. Victoria, South Australia, Western Australia and Tasmania have abolished controls on most aspects of milk distribution and pricing beyond the farm-gate, while New South Wales and Queensland will follow suit on 1 July and 31 December 1998 respectively.

However, all states continue to regulate the supply and farm-gate price of market milk. This regulation is much more intrusive than the Commonwealth regulations supporting manufacturing milk production (which are currently being phased out).

Farm-gate controls for market milk

Dairy authorities in each state have legislative responsibility for managing milk supply to ensure that adequate amounts of good quality drinking milk are available throughout the year. To achieve this, they set farm-gate prices for market milk and limit supply to levels consistent with demand at those prices.

Box 3.1: Other forms of government involvement in the dairy industry

In addition to state market milk controls and Commonwealth support for manufacturing milk, governments are involved in the dairy industry in other ways.

Examples include:

- Domestic production of certain types of cheese receives assistance through a tariff quota on imports from countries other than New Zealand, Papua New Guinea and the South Pacific Forum Islands. The arrangements allow for the importation of up to 11 500 tonnes of dutiable cheese at a tariff rate of \$96 per tonne, with imports above that level attracting a penalty tariff of \$1330 per tonne (reducing to \$1220 per tonne in 2000). At present, imports are well below the level that would trigger the penalty tariff.
- The Australian Dairy Corporation (ADC) undertakes a range of export promotion activities aimed at increasing the awareness and preference for Australian dairy products and improving market access by enhancing the image of the Australian dairy industry as a trading partner. In 1995–96, international promotions focused on growing Asian markets such as Japan, Hong Kong, Singapore, China and Vietnam.
- The ADC and state governments provide a range of services to the industry. Services provided by the New South Wales Dairy Corporation include: a contingency fund to meet abnormal industry costs; food safety monitoring (see below); milk marketing; and commercial services such as management advice and technical analysis.
- State dairy authorities set and/or monitor industry compliance with a range of health and quality standards. The New South Wales Dairy Corporation's Food Safety Program includes licensing, inspection and the Hazard Analysis Critical Control Point quality assurance program.
- The Dairy Research and Development Corporation (DRDC) evaluates research needs in the dairy industry and funds projects addressing those needs. (Most of Australia's major rural industries have such a corporation.) The DRDC is funded through a levy paid by Australian dairy farmers and contributions from the Commonwealth Government. In 1995–96, receipts from the levy were about \$6.9 million and contributions from the Commonwealth about \$9.4 million. The focus of the DRDC's research is on sustainability, natural resource management and animal welfare (DRDC 1996).

An important consequence of the controls is that the price to farmers for market milk is well above the price that would apply in an unregulated market

(see chapters 4 and 5). Moreover, at 52 cents per litre, the Australian average ‘farm-gate’ market milk price in 1995–96 was double the average farm-gate price for otherwise identical manufacturing milk (see table 3.1). Maintenance of this price difference requires controls on interstate trade in milk (see below).

The mechanisms used to regulate the supply of market milk within each state vary. In New South Wales, Queensland and Western Australia, quotas are used to determine farmers’ rights to supply the lucrative fresh milk market. In other states, pricing arrangements average or ‘blend’ the returns from the fresh and manufacturing milk markets, so that all farmers benefit from the higher prices obtained for market milk.

Table 3.1: Farm-gate market and manufacturing milk prices,^a 1995–96 (cents per litre)

	<i>Manufacturing milk</i>	<i>Market milk</i>
New South Wales	25.9	52.9
Victoria	27.5	46.5
Queensland	21.2	56.8
South Australia	19.1	49.8
Western Australia	18.3	52.0
Tasmania	24.3	53.3
Australia ^{b,c}	26.3	51.7

a Prices paid for milk received before deduction of freight and levies.

b Weighted average (by volume).

c The prices net of transport costs used in the assistance calculations in chapter 4 are 24.3 cents and 49.8 cents per litre respectively.

Source: Information supplied by the ADC

All milk produced in New South Wales is formally vested in the New South Wales Dairy Corporation. Farmers are registered to supply designated milk factories, which act as the Corporation’s processing and selling agents. The Corporation sets the farm-gate and processing input prices for market milk and for partly-processed products such as flavoured and UHT milk using a formula which includes cost indexes derived from Corporation surveys. (And, until deregulation in mid-1998, it will also continue to set processing and wholesale margins, processor selling prices and retail prices.)

The Corporation reviews farm-gate market milk prices quarterly against the CPI (using a CPI-x formula). This means that price increases are

administratively determined according to costs. In contrast, manufacturing milk prices are driven by demand conditions as well as reflecting cost factors. Farmers also receive a bonus or penalty based on the milk fat and protein content of their milk (under the Quality Payments Scheme) and according to its total plate count and bulk milk cell count (under the Composition Payment Scheme).

The New South Wales quota system

Some 97 per cent of New South Wales farmers hold quotas. The proceeds of market milk sales are distributed to them in proportion to their quota holding. The quota is set at about 110 per cent of expected demand. Hence, about 88 per cent of the total quota pool is typically accepted as market milk.

Quota for any of the 13 four-week periods which make up the quota year are tradeable through a quota 'exchange'. All trades in a period are settled at the market clearing price. The average price for quota over the last year was about 56 cents per litre for the right to supply in a particular quota period 'in perpetuity' (see table 3.2). Leasing of milk quota on a temporary basis is not permitted.

Across the 13 four-week quota periods listed in the table, the average quota price varied from a low of 36.9 cents per litre for June/July quota to a high of 77.3 cents per litre for October quota. The difference in these prices reflects the greater cost of out-of-season supply. An approximation of the year-round average cost of assuring out-of-season supply can be derived by comparing the discounted peak quota value and the discounted year-round average quota price. (Chapter 5 discusses this in more detail as part of a broader discussion of the extent to which market milk prices would fall if the current farm-gate controls were abolished.) More generally, the fact that quota has value in all quota periods confirms that regulated farm-gate market milk prices are more than sufficient to cover production costs at all times of the year.

The rules governing trade in quotas are part of a wider suite of regulations underpinning the quota system. Amongst other things, these provide penalty provisions for shortfalls in production against quota holdings, set qualifying requirements to transfer quota between farms and regions and determine 'licensing' requirements for farmers wishing to enter the industry. One of the New South Wales Dairy Corporation's underlying objectives is to ensure 'equitable sourcing' of market milk.

Many of these restrictions are highly prescriptive and give the Corporation considerable administrative discretion. For example, the regulations covering a farmer's capacity to allocate quota across more than one dairy property (so-called combination rules) specify that:

- (vii) A dairy farmer holding a combination of quotas must at all times comply with any conditions which have been attached by the Corporation to its approval of such combination, and with any conditions that are from time to time notified by the Corporation to the dairy farmer by way of variation, withdrawal or replacement of those conditions ...
- (viii) The Corporation may at any time require a dairy farmer holding a combination of quotas to prove, to the satisfaction of the Corporation, that he/she has at all times complied and continues to comply with all conditions from time to time attached to the approval of his/her combination ... If a dairy farmer fails to comply with such a requirement by the Corporation, the Corporation may withdraw any approval given to his/her combination and may thereupon forfeit either part or all of the dairy farmer's total quota, as it thinks appropriate (NSW Dairy Corporation 1997a, pp. 4-5).

Table 3.2: Prices for New South Wales market milk quotas, by quota period^a (cents per litre)

<i>Quota period</i>	<i>Month(s) in which the four-week quota period falls each year</i>	<i>Market clearing price</i>
1	June/July	36.89
2	July/August	56.02
3	August/September	64.51
4	September/October	75.15
5	October	77.27
6	November	74.48
7	December	67.65
8	January	62.82
9	February	51.90
10	March	43.82
11	April	41.53
12	April/May	40.82
13	May/June	38.94
	Average for the past 13 quota exchanges	56.29

a Average of prices from last 13 quota exchanges (to June 1997). Quota can be traded up to 13 production periods in advance.

Source: New South Wales Dairy Corporation (1997b)

As discussed in chapter 5, such administrative discretion, along with the restrictions on how quota can be used and traded, increases the cost of meeting the state's milk requirements and reduces the value of quota to farmers.

Effects on market milk output and production

Higher regulated farm-gate prices for market milk are tantamount to a tax on consumers. This tax reduces the demand for market milk. While the responsiveness of milk demand to price changes is relatively low, the New South Wales farm-gate market milk controls may have reduced consumption by around 3 per cent, or about 20 million litres each year. (This is based on a price elasticity of demand of -0.15 (see IC 1991b) and a retail price increase attributable to the controls of 20 cents per litre (see chapter 5).) Thus, in the

event of deregulation, some milk currently used in the manufacturing sector would be redirected to the fresh milk market.

While the New South Wales controls have led to a small redistribution of production between market and manufacturing milk, their impact on total state milk production is unlikely to have been significant. In effect, the quota system sees the fresh milk market supplied first and the balance of production used in manufactured products. However, as discussed in chapter 4, the system does not increase returns to ‘marginal’ manufacturing milk and hence provides little incentive to increase overall milk production. Thus, in New South Wales and the other quota states, incentives to increase production largely come from Commonwealth support for manufacturing milk.

In contrast, in the non-quota states where returns on manufacturing and market milk are ‘blended’, state market milk controls augment the incentives provided by the Commonwealth arrangements to increase total milk production (see IC1991b, pp. 42-3, 55-7 and appendix C).

State restrictions on interstate trade

A feature of the Australian industry is the low volume of interstate trade in fresh milk.

This is partly explained by transport costs which sometimes exceed any differences in production costs between the states.

However, it also reflects legislation which gives state dairy corporations the power to regulate the farm-gate price of market milk exported to other states. In essence, this legislation requires that all of a state’s market milk production, including any exported to another state, be sold for processing through that state’s dairy corporation at the regulated farm-gate price.

The purpose of these restrictions on interstate trade is to remove the incentive for producers in, say, Victoria to redirect milk otherwise destined for use in manufactured dairy products to the more lucrative New South Wales fresh milk market. The effect of such trade would be to reduce the current margin between the farm-gate prices for market and manufacturing milk.

The legislation, which has been progressively introduced in the states over the last decade, has replaced the ‘comfort clause’ provisions in previous Commonwealth support arrangements for manufacturing milk. The comfort clause provisions provided for the suspension of support in the event of ‘disruptive’ interstate trade in market milk. However, as discussed in IC (1991b), ongoing reductions in the level of Commonwealth support for manufacturing milk progressively reduced the effectiveness of that threat.

The legality of the state legislation has been questioned. During its 1991 inquiry, the Commission received an opinion from the Commonwealth Attorney-General's Department that the relevant section of the then Victorian dairy legislation was 'wholly invalid', as it contravened section 92 of the Constitution, which provides for free trade within the Commonwealth (IC 1991b, pp. 46-8 and appendix D). Industry representatives disputed this, claiming they had legal opinions to support the view that the arrangements were not in breach of the Constitution. But either way, the need for such restraint on interstate trade highlights the fact that retail prices for market milk are higher than they would be were the current farm-gate controls abolished (see chapter 5).

Notwithstanding these regulations, some interstate trade in raw and packaged milk does take place, albeit at regulated prices. Examples include trade between the Orbost and Gippsland areas of Victoria and the Bega Co-operative in New South Wales, and between Queensland and the Northern Territory. And in recent years, packaged milk from Victoria has been sold in supermarkets in Sydney.

3.2 Commonwealth support for manufacturing milk

The Commonwealth has for many years provided support to manufacturing milk production. This support has increased total milk output.

Under the 'Kerin Plan' (1986 to 1992) and the 'Crean Plan' (1992 to 1995), this support took the form of a levy on all milk, which was used to subsidise exports of manufactured dairy products. Apart from assisting farmers, these arrangements were designed to improve the efficiency of the dairy manufacturing sector by ending the pooling of returns across products and across domestic and export markets. The revised arrangements led to considerable rationalisation in the industry, allowing it to realise greater economies of scale in production, marketing and promotion.

The current scheme, which dates from 1 July 1995, is essentially a continuation of the Crean Plan, with some changes to make it less susceptible to challenge under World Trade Organisation rules which restrict the use of direct export subsidies. Its intention is to provide roughly the same level of assistance to manufacturing milk production as would have been provided under the Crean Plan.

How do the controls work?

Under the new arrangements, the ADC imposes separate, compulsory levies on market milk and manufacturing milk used in dairy products sold in Australia. Through a rebate system, manufacturing milk used in production for export is exempt. The funds raised are used to pay a subsidy to all manufacturing milk.

More specifically, in 1995–96:

- farmers paid a levy of about 1.9cents per litre on milk consumed domestically as market (drinking) milk;
- manufacturers paid a levy of about 3.9cents per litre on all milk used in the production of cheese, powdered milk, butter and other manufactured dairy products for domestic sale; and
- \$150 million was paid to farmers in proportion to their total production of manufacturing milk. This was equivalent to about 2.2cents per litre.

The overall effect of the Commonwealth support arrangements is to increase production of milk which is used in dairy products sold on the export market. However, the cross subsidies inherent in the arrangements and their inter-relationship with the state market milk controls means that the precise impacts are quite complex (see below).

The subsidy rates under the new arrangements continue the phase down in support that began under the Kerin Plan in 1986. Maximum subsidy rates (linked to export prices) are specified in the legislation, although in recent years levy collections have not been sufficient to provide these levels of support. In 1995–96, the 2.2 cents per litre subsidy increased gross returns on manufacturing milk by about 7 per cent (see table 4.1). This compared to a 50 per cent subsidy during the first year of the Kerin Plan.

The current scheme will terminate at the end of June 2000. After that date, the dairy industry will receive (unspecified) Commonwealth assistance comparable to other industries. (In tariff terms, average assistance will be about 5 per cent in 2000.)

Impact of the Commonwealth controls

Like the state market milk controls, the Commonwealth levy arrangements assist farmers primarily by taxing consumers. As noted above, in broad terms, this encourages greater production of manufacturing milk and increases the total number of resources employed in dairy farming.

However, the precise impacts on dairy farmers are more complicated.

The levy paid by farmers on market milk overlaps with the price raising effect of the state market milk controls. In the absence of the state controls, the imposition of the levy would increase milk prices to consumers. However, under the current arrangements, the state controls have increased market milk prices by much more than the levy. In these circumstances, the levy on market milk is akin to a tax on farmers, rather than consumers, which reduces the benefits to them of the state market milk controls. In 1995–96, this tax was around \$35 million or about 9 per cent of the total transfer to market milk producers (see chapter 4). (The Commission’s estimates of effective assistance to market milk production take this taxing effect into account.)

There is also the suggestion that increasing import competition for some manufactured dairy products (particularly from New Zealand) may limit the extent to which manufacturers are able to pass on the levy on manufacturing milk to Australian consumers. Were manufacturers constrained by such competition from passing on the full amount of the levy, then the price they would be prepared to pay farmers for manufacturing milk would be less than the export parity price in the absence of the arrangements. Thus the gross benefit to farmers of the Commonwealth levies on manufacturing milk would be less than the subsidy payments made by the ADC.

However, whether such an outcome is likely is open to question. Were the price of domestic manufacturing milk to fall below export parity, some farmers would seek to divert milk to export markets. This incentive would exist even though it might be in the overall interests of the industry to accept prices below export parity. (From the industry’s viewpoint, there is a trade-off between accepting lower prices and forgoing the benefits of the levy on domestic manufactured dairy products.)

More importantly, it appears that New Zealand producers are increasing their prices for dairy products exported to Australia to export parity plus the Commonwealth levy, thereby benefiting at the expense of Australian consumers. (The New Zealand industry’s single desk selling arrangements give it scope to do this.) This in turn would mean that the subsidy payments by the ADC are a good indicator of the benefits to Australian farmers from the current Commonwealth support arrangements.

Finally, the impact of the arrangements varies considerably across farms and states depending on the relative proportion of farm production going to market and manufacturing milk. Thus, as discussed in chapter 4, the Commonwealth arrangements provide major benefits to farmers in Victoria — the major manufacturing milk state — but virtually no benefit to farmers in New South Wales.

4 ASSISTANCE TO THE DAIRY INDUSTRY

This review is being undertaken in accordance with the Competition Principles Agreement. This requires the review panel to apply a benefit-cost test to the New South Wales dairy industry arrangements.

One indication of the cost to the community of the current arrangements is the extent to which they increase returns to dairy farmers. These benefits to farmers are paid for largely by consumers through higher milk prices.

Apart from penalising consumers, higher returns to farmers from state and/or Commonwealth support measures can provide an incentive for expansion in dairying activity. This disadvantages other rural activities competing for land and capital. Thus, whether such expansion in dairying represents an effective use of farm resources, depends on the value of those resources in their alternative uses.

Comparing government support for dairying with that for other activities provides a handle on this trade-off. In general, resources used in highly assisted activities produce less wealth (net of government assistance) for the community than if they were redirected to lowly assisted activities.

To facilitate such comparisons, the Commission estimates assistance on a consistent basis for a wide range of industries and activities. This chapter provides updated estimates of assistance to milk production; interpretation of those estimates; details of the methodology used; and comments on criticisms of that methodology.

However, the Commission emphasises the importance of focusing on the broad policy messages emerging from the estimates rather than on their precise level. The Commission's experience in this and other industries points to the potential for the review to become diverted into unproductive debate on changes to methodology and assumptions that would not substantially alter these messages. Varying underlying assumptions will of course change estimated assistance levels. But whatever the precise magnitudes, there can be little dispute that the current regulatory arrangements for dairying provide generous assistance in comparison to that available to most other Australian industries.

The Commission also stresses the importance of proper interpretation of the estimates and, in particular, the need to distinguish between transfers from consumers to producers, the efficiency costs of assistance and the likely resource flows were that assistance removed. For many industries, the

Commission's assistance estimates provide a reasonable guide to the effect of the assistance regime on the volume of resources used in those industries. However, in the case of dairying, the nature of the industry and the current regulations mean that conventional assistance estimates are less useful indicators of resource flows. This illustrates the more general point that assistance estimates are a complement to, rather than a substitute for, thorough analysis of the impacts of government interventions.

4.1 Assistance methodology

The Commission uses the same broad framework for estimating assistance to all industries. This allows it to compare assistance across industries.

The assistance estimates attempt to gather together in single summary measures the range of government interventions that affect returns to producers in individual industries and thereby their capacity to attract resources. Thus, the estimates incorporate interventions that disadvantage activities as well as those that are of benefit.

Main measures

The key measures referred to in the subsequent discussion are:

- *The nominal rate of assistance:* This measures the assistance provided to an industry's outputs. It is equal to the percentage increase in gross per unit returns attributable to that assistance.
- *The effective rate of assistance:* This measures net assistance provided to an industry's value added. It is equal to the percentage increase in unit value added, after accounting for the benefits of assistance on outputs and inputs, and the tax effect of any tariffs and other policy-induced cost imposts on inputs.
- *The price distortion:* This measures the price raising impact of assistance to an industry. It is equal to the percentage increase in prices at the ex-factory or farm-gate level attributable to that assistance. (If all assistance to an industry's outputs increases prices and all production is sold domestically, then the nominal rate and the price distortion will be the same).
- *The producer transfer:* This measures the dollar value to producers of assistance on an industry's outputs. While such transfers are not directly comparable across industries, they are an accessible indicator of the significance of government support for a particular activity. In the case

of dairying, they can also help to illustrate the variable impact across the states of the current regulatory arrangements.

(For a more detailed discussion of these measures and their application to the dairy industry see IC 1991b, c and d.)

Data sources and coverage of interventions

Data sources

The Commission uses data bases that facilitate comparison of assistance across industries and over time. For dairying and other agricultural activities, the data come from:

- Australian Bureau of Agricultural and Resource Economics (ABARE) surveys;
- Australian Bureau of Statistics (ABS) data on the value of commodities produced; and
- specific commodity data collected by industry authorities such as the Australian Dairy Corporation.

Assistance to manufacturing activities is calculated using ABS census data. As set out in IC (1991c), the difference in data bases may explain a small part of observed differences in assistance to particular manufacturing and agricultural activities.

Coverage

Obtaining information on all government interventions that affect returns in a particular industry would be very costly and time consuming. Estimating the impacts of interventions with only minor or indirect effects on an industry's returns would also be problematic.

Hence, the Commission focuses on those interventions likely to have significant impacts on a particular industry. In the case of the dairy industry these include:

- output assistance provided through: price support for manufacturing milk; marketing arrangements for fresh milk; and tariff quotas on some imported cheeses;
- cost penalties from tariffs on the industry's material and capital inputs; and
- assistance to inputs to dairy farming such as government expenditure on research and special income tax concessions for primary producers.

The price support arrangements for manufacturing milk and the marketing arrangements for fresh milk dominate the assistance estimates.

As for other agricultural activities, the value of the diesel fuel rebate to dairy farmers is not counted as assistance to the industry. This reflects the Commission's view that the rebate simply offsets an inefficient tax on a business input. Amongst the other factors excluded from the Commission's estimates are: any state government assistance to the industry; subsidies from the underpricing of irrigation water in some parts of Australia; and inefficiencies in the supply of infrastructure services used by the industry (see further discussion in section 4.3).

Key assumptions

The assistance estimates for the dairy industry embody the standard assumptions in the nominal and effective rates framework. These include:

- Consumers view local and imported goods of the same description as being identical.
- Australia's volume of export sales and level of import demand have no impact on export or import prices.
- The direction of trade in the absence of assistance can be assessed, with import parity being the benchmark price for import competing goods and export parity for exported goods.

These (and other) assumptions are necessary to simplify complex real world relationships in a way that allows a comparison of assistance levels across industries.

But equally, they mean that all assistance estimates should be treated as approximate. And for policy purposes there is no great significance in small differences in assistance levels. For a more detailed discussion of these and other general assumptions see IC (1995).

There are also some specific assumptions that underpin the Commission's estimates of assistance to the dairy industry. For the 1995–96 estimates, these include:

- Transport costs and processing margins are unaffected by Commonwealth and state government support for milk production. This implies that dairy farmers appropriate all of this support in the form of higher milk prices.
- In the absence of assistance, the industry would be an exporter of dairy products. Thus, the 'export parity' price is used as the benchmark for

calculating assistance to manufacturing milk. Under the new Commonwealth market support arrangements, the export parity price is assumed to be equal to the Australia-wide weighted average manufacturing milk price paid to farmers by processors, net of transport costs. These transport costs are assumed to average 2 cents per litre.

- Market conditions allow dairy manufacturers to recoup the full amount of the levy on domestic manufacturing milk from consumers.
- The unassisted benchmark price for market milk is equivalent to the Australian average price for manufacturing milk plus a 20 per cent margin for the cost of assuring out-of-season supply.
- The assisted market milk price is the average price paid to farmers, less transport costs. For 1995–96, the Commission used price and transport cost information supplied by the ADC. For the Australia-wide estimates, a production-weighted Australian average market milk price is used.

Some of these assumptions are different to those used in the estimates for earlier years. These differences largely reflect the changes to the Commonwealth market support arrangements that took effect at the beginning of 1995–96. While this means that the 1995–96 estimates are not strictly comparable with the earlier estimates, it does not alter the key finding that dairying is highly assisted relative to most other activities in the economy.

The validity of these and other assumptions is considered in section 4.3 below.

4.2 Assistance estimates

Table 4.1 presents the Commission's Australia-wide estimates of nominal and effective rates for milk production and the manufacture of dairy products from 1992–93 to 1995–96.

As is apparent from table 4.1, milk production in general, and market milk in particular, are highly assisted in comparison to the average for the rural sector. High assistance for market milk is a direct result of state government pricing and production controls.

Table 4.1: Nominal and effective rates of assistance for milk production and dairy products manufacture, 1992–93 to 1995–96 (per cent)

Activity	Nominal rate				Effective rate			
	1992-93	1993-94	1994-95	1995-96	1992-93	1993-94	1994-95	1995-96
Milk production	19	25	28	21	54	75	93	62
Manufacturing milk	9	8	9	7	20	17	21	19
Market milk	37	76	80	71	118	>200	>200	>200
Average for agriculture	4	4	3	na	10	11	11	na
Liquid milk and cream	11	10	10	8	-3	-3	-3	-3
Butter	23	21	20	18	23	21	20	17
Cheese	14	13	12	11	7	6	6	5
Ice cream, frozen confections	5	5	5	4	-2	-1
Milk products nec	12	11	11	10	12	12	13	12
Milk products	13	12	11	10	3	3	3	3
Average for manufacturing	7	6	5	5	12	10	9	8

.. 0 — 0.5 per cent

na: not available

Source: IC (1995), IC (1996) and Commission estimates

As shown, assistance to market milk has increased substantially in recent years. This is because falls in manufacturing milk prices in 1993–94 and 1994–95 were not matched by reductions in market milk prices. The increase in assistance contrasts with declines in assistance in virtually all other parts of the economy.

In nominal rate terms, assistance to a number of manufactured dairy products is also high. This mainly reflects the Commonwealth price support arrangements which lead to higher domestic prices for those products.

However, the benefit to manufacturers of these higher prices is offset by the levy they pay on the milk input in those products. Hence, effective rates of assistance for the major manufactured dairy products are generally low.

Assistance at the state level

The aggregate figures in table 4.1 conceal considerable variation in rates of assistance across the states.

At one level, the benefit to each state's farmers from the Commonwealth market support arrangements depends on the relative proportions of their production used in dairy products and market milk. This is because the levy paid by farmers on market milk pays for some of the subsidy to manufacturing milk production. Hence, the smaller the proportion of a state's total milk production that goes to manufacturing, the lower the overall benefit to it of the Commonwealth support arrangements. Indeed, in 1995–96, Commonwealth support payments to New South Wales farmers of around \$11.3 million were only fractionally more than the levies paid by them of some \$11.2 million. This was in contrast to Victoria, where payments to farmers were about \$110 million compared to levies of around \$10million.

There is also considerable variation across the states in the price premium on market milk above the (adjusted) Australian average price for manufacturing milk. In 1995–96, this premium ranged from a little over 15 cents per litre in Victoria to nearly 28 cents per litre in Queensland. At around 21 cents per litre, the New South Wales premium was close to the weighted Australian average. Thus, as in previous years, assistance to market milk production in New South Wales was also close to the Australian average (see table 4.2).

At another level, it is possible to differentiate between assistance across all milk production, and assistance provided to *additional* milk production. In most industries these rates would be identical. However, in some of the state dairy industries, including New South Wales, there is a price wedge between returns on market milk and on out-of-quota manufacturing milk. This means that marginal assistance is considerably lower than average assistance (see further discussion in section 4.3).

Interpreting the estimates

The Commission stresses that the estimates reported above reflect transfers between groups in the community, not resource efficiency costs (see below). More specifically, they (primarily) reflect transfers from domestic consumers of market milk and manufactured dairy products to dairy farmers. Australia-wide, in 1995–96, the transfer to farmers from the market milk controls alone was around \$380million in (table 4.2).

Table 4.2: Producer transfers and price distortions for market milk production, Australia and New South Wales, 1992–93 to 1995–96

	1992–93	1993–94	1994–95	1995–96
Australia				
— Producer transfer (\$m)	230	344	375	380
— Price distortion (%) ^a	37	76	80	71
New South Wales				
— Producer transfer (\$m)	89	109	124	128
— Price distortion (%)	46	69	78	72

a Revised from previously published estimates. These revisions were made to overcome an inconsistency arising from the way in which the various data bases used in the estimates had been merged.

Source: Commission estimates

However, some caution is required in inferring that consumers would reclaim all of the transfers reported in table 4.2 in the event of deregulation of state market milk arrangements. For example, the industry argues that there may be some increase in transport, processing and retailing margins. The transfers also include the levy paid by farmers as part of the Commonwealth support arrangements for manufacturing milk. This levy will remain in place until 2000, irrespective of what happens at the state level. (The extent to which fresh milk prices would be likely to fall as a result of deregulation is discussed in detail in chapter 5.)

Efficiency costs

The Commission's assistance estimates do not indicate whether an industry uses resources in a technically efficient way. Indeed, industries whose capacity to attract resources is enhanced by government interventions may use those resources effectively. However, as noted earlier, the presumption underlying the Commission's framework is that some of those resources would produce a greater benefit for the community if used in activities which are viable with little or no support.

The overall efficiency costs of assistance arrangements have several dimensions.

There are costs from an inefficient expansion of production and (usually) from reduced consumption of the product concerned. The size of these losses is a function of the responsiveness of demand and supply in the industry and the level of assistance. Hence, the usual and reasonable presumption is that

the higher is assistance, the higher will be the (per unit of output) efficiency costs. However, these ‘deadweight’ efficiency costs are usually only a small proportion of the transfers to producers in the industry concerned.

Assistance arrangements for an industry can also have adverse flow-on effects for the rest of the economy. For instance, in the case of dairying, assistance may penalise other agricultural industries by increasing the price of land.

Moreover, in the dairy industry, there also costs associated with an inefficient distribution of milk production within and across states. These efficiency costs come from restrictions in the market milk quota arrangements in states such as New South Wales, and from legislation discouraging interstate trade in market milk.

These flow-on and location costs mean that the partial deadweight efficiency costs will understate the overall efficiency costs of current dairy assistance, possibly by a significant amount. Chapter 5 discusses the efficiency costs of the New South Wales market milk controls in more detail.

Resource flows

In most industries, levels of effective assistance provide a reasonable guide to the induced resource flows. That is, some resources are usually attracted away from lightly assisted activities to more heavily assisted ones.

However, as already noted, the nature of the arrangements for dairying makes it more difficult to draw conclusions on induced resource flows from the assistance estimates. This has been a criticism of the Commission’s estimates and is therefore addressed in detail in the following section.

4.3 Criticisms of the Commission’s approach

During the 1991 inquiry, the industry criticised various aspects of the Commission’s methodology for measuring assistance to milk production.

In response to these criticisms, the Commission made some adjustments to its methodology. Moreover, some of the criticisms have since been rendered redundant by the recent changes to the Commonwealth market support arrangements.

However, recent discussions indicate that the industry still has concerns about the Commission’s methodology. This section discusses some of the key criticisms and the Commission’s responses to them.

Export parity as the base price for estimating assistance

During the 1991 inquiry, the industry questioned the assumption that, in the absence of assistance, there would be exports of all major dairy product groups. Were the industry to become import competing, then import parity rather than export parity would be the appropriate price benchmark for estimating assistance to milk production. Similarly, if dairy products were to become non-traded, then the conceptual price benchmark would lie somewhere between export and import parity. Either way measured assistance to milk production would fall.

In support of their contention, the industry noted that some cheeses were already import competing. Import competition has since increased, albeit from a generally low base. More generally, Freebairn (1992) raised the possibility that the lower returns to dairy farmers that would accompany deregulation could reduce production to such an extent, that most dairy products could become 'non-traded'. That is, all production would be used up servicing local demand.

However, in its 1991 report, the Commission pointed to a range of evidence suggesting that a deregulated dairy industry would still be a significant exporter. Continuing growth in exports during the 1990s despite ongoing reductions in Commonwealth support for manufacturing milk, supports this contention. Moreover, as discussed in the 1991 report, using an import parity benchmark for cheese — the product for which import competition is greatest — would not significantly change measured assistance to milk production as a whole.

Further, the Freebairn contention that the dairy industry could cease exporting was premised on deregulation leading to greater reductions in milk prices and therefore in milk production than estimated by the Commission. The corollary of this was that Freebairn argued that the Commission had understated the price raising effects of the Commonwealth and state regulations and hence the level of assistance provided to dairying. Indeed, Freebairn's estimates of the efficiency costs of the then arrangements under assumptions that rendered the industry non-traded under deregulation, were more than double the Commission's estimates.

The use of subsidised world price benchmarks

As an exporter, returns to dairy production in Australia are significantly affected by assistance provided by overseas governments to their dairy producers. In particular, United States and European Union export subsidies have significantly reduced prices on world markets.

A common argument is that, when estimating assistance, the Commission should calculate an unsubsidised export price, rather than base its estimates on 'corrupted' world prices. A rebasing of the estimates along these lines would reduce measured assistance to the dairy industry.

If corrupted world prices were regarded as a short term aberration, there would be some substance to this argument.

However, corrupt prices and the underlying subsidies are long standing. Hence, these prices are the most appropriate measure of the opportunity cost of resources used to produce dairy products in Australia. As noted previously, the rationale for measuring assistance is to indicate incentives for efficient resource allocation across Australian industries.

The relativity between market and manufacturing milk prices in a deregulated environment

The Commission measures nominal assistance for market milk as the percentage difference between the regulated farm-gate price for market milk and the adjusted farm-gate price for manufacturing milk. The adjustment in the manufacturing milk price reflects an allowance for assuring out-of-season supply.

Prior to the 1991 inquiry, the Commission's adjusted manufacturing milk prices varied across states. This was because the out-of-season allowance depended on the assessed potential for imports of milk from other states.

However, in response to the argument that even in a deregulated environment, interstate trade in market milk might not be significant, the Commission changed its manufacturing milk benchmark. For all states this is now set at the weighted average Australian price for manufacturing milk plus an allowance of 20 per cent for the costs of assuring out-of-season supply.

The Commission's recent discussions indicate continuing industry concern with the revised methodology. In essence, there is a belief that the Commission's approach understates the price gap that would exist between market and manufacturing milk in a deregulated environment. In turn, this implies that the price premium for market milk attributed by the Commission to state production and pricing controls is overstated.

The likely impact of deregulation on the price of market milk is discussed in detail in chapter 5. There the Commission sets out reasons why it would expect market milk prices at the farm-gate to fall to close to the (adjusted) farm-gate price for manufacturing milk.

But even were the market milk premium cut to a third or a half of the level in the current Commission estimates, assistance to milk production would still be considerably higher than for most agricultural and manufacturing activities. Again this serves to highlight the importance of focusing on the broad messages rather than on the details of the estimates.

The treatment of non-traded inputs

Another criticism of the Commission's assistance estimates is that they do not account for some government interventions that increase the costs of dairy farmers' non-traded inputs. Relevant in this regard are inefficiencies in the provision of government services such as transport, irrigation water and power.

In principle, assistance estimates should account for all interventions that lead to inefficiencies in the supply of inputs to an industry.

In practice, however, this would be time consuming and beset by information problems. Hence, as noted above, the Commission focuses its attention on the key interventions affecting output prices and the cost of an industry's inputs.

In any event, incorporating inefficiencies in the provision of non-traded inputs in assistance estimates would not necessarily show dairying in a more favourable light. These inefficiencies affect most activities in the economy. Hence, the relative position of dairying on the assistance scale would only be improved if it were a more intensive user of these non-traded inputs. Compared to other agricultural activities, this is only likely to be true for irrigation water. And, at least until recently, underpricing of irrigation water provided considerable assistance to farmers. Thus, adjustments to the estimates in this area could well increase the disparity between assistance to dairying and other agricultural pursuits.

The level of aggregation in reporting assistance

Farm-based measures

During the 1991 inquiry, a number of participants suggested that the Commission should measure assistance for dairy farming rather than for milk production. This would see by-products of milk production, such as bobby calves, and other activities undertaken on dairy farms, included in the assistance estimates. Estimates in the 1991 inquiry indicated that farm-based nominal and effective rates were around a quarter and one-third lower than the

rates for milk production. This reflected much lower assistance to non-milk outputs — primarily sales of beef and veal.

However, given that milk production accounts for more than 80 per cent of the average dairy farm's output (ABARE 1997a), measuring assistance on a farm basis would not alter the industry's 'highly assisted' status. Moreover, such a change would render the treatment of dairying inconsistent with the Commission's treatment of other agricultural activities.

Assistance to the dairy industry as a whole

Another argument in the 1991 inquiry was that the Commission should measure assistance for the dairy industry as a whole. In effect, this would average assistance across highly assisted milk production and more lowly assisted dairy manufacturing.

In support of this proposition, the industry argued that:

- there is considerable interdependence between the farming and processing and manufacturing sectors of the industry;
- the assumption that all assistance provided by the previous Commonwealth market support arrangements was passed back to farmers was dubious; and
- measured high assistance for market milk and lower assistance for manufacturing milk and dairy products are inconsistent with likely changes in the size of these sectors were the industry deregulated — see below.

The rationale for the Commission's assistance break-up partly reflects the fact that the production of milk competes for resources most directly with other farming activities, whereas the processing and manufacturing segments of the industry compete with other manufacturing activities. In addition, the impacts of government policies on the two sectors of the industry are very different. The logic of merging the agricultural and manufacturing segments when calculating assistance is therefore dubious.

Under the previous Commonwealth assistance arrangements, the break-up necessitated assumptions about the extent to which export assistance for dairy products was passed back to farmers in the form of higher milk prices. The Commission's assumption that none of this assistance was appropriated in higher transport or processing margins was clearly a strong one. It was, however, consistent with another industry argument that the regulated arrangements have served to keep processing margins tight.

But under the new Commonwealth arrangements, support for manufacturing milk is paid direct to farmers. This means that the case for calculating assistance on an aggregated basis because of the difficulty of estimating the extent of assistance pass back, no longer exists.

Relationship of assistance estimates to resource flows

Another criticism of the Commission's estimates is that measured high assistance for market milk and lower assistance for manufacturing milk and dairy manufacturing sits uncomfortably with expected changes in the size of these sectors were the industry deregulated. For instance, the industry points out that the market milk sector would expand not contract.

This expansion would, of course, reflect the diversion of raw milk to the drinking milk market in response to greater consumer demand at lower prices. As such it is hardly a surprising result.

That said, the Commission's estimates for dairying are a less useful indicator of the impact of assistance on resource flows than is the case for many other industries. As previously noted, this is as much a caution on the need to interpret the estimates carefully as a criticism of the estimates per se.

There are two reasons for this.

First, notwithstanding the possibility of imports from New Zealand, raw milk is essentially a non-traded commodity. Hence regulatory changes that alter the availability and price of locally produced raw milk will affect the dairy manufacturing industry irrespective of its level of assistance.

This is in contrast to the standard cases where the supplier of an input is either import competing or an exporter. In the former case, changes in the supply of the locally produced input are balanced by offsetting changes in the volume of imports, so that input prices do not change. And in the latter case, the volume of exports adjusts to leave supplies available for the local market unchanged. Thus, in both cases, the downstream industry is largely unaffected by changes affecting the input supplier. This in turn means that activity in the 'standard' processing industry is more closely related to its level of assistance than is the case in dairy manufacturing.

Second, the nature of the current market milk arrangements means that assistance on marginal milk production varies across states and, in some cases, is different from the 'average' assistance measures reported above. It is assistance at the margin which provides the best indicator of the incentives for resources to move in and out of activities.

The notional industry in the Commission's assistance framework is a price taker operating in a single market. Hence, average returns and returns on marginal output are identical.

However, as noted by Parish (1962), price discrimination across markets of the sort applying in the dairy industry can place a wedge between average and marginal returns.

In his 1992 analysis of the industry, Freebairn notes that in states such as New South Wales where quotas are used to restrict supplies of market milk, the returns on additional, out-of-quota, production are set by the manufacturing milk price. (Only for those farmers on the verge of producing or not producing their quota of market milk is the marginal return equal to the market milk price.) Hence, the marginal assistance rates for milk production are equal to those for manufacturing milk, with the incentives to increase milk production coming from Commonwealth support for manufacturing milk. The state market milk controls then operate to distribute that production between the drinking milk and manufacturing sectors, without having any significant impact on overall milk production.

In contrast, in the non-quota states of Victoria, Tasmania and South Australia, farmers receive a pooled price across their sales of manufacturing and market milk. Thus, although average and marginal returns are equivalent, they lie above the manufacturing milk price. The size of this wedge depends on the ratio of manufacturing milk sales to total sales. The upshot is that the current arrangements provide greater incentives for resources to relocate in dairying in the non-quota states. The IC (1991b) discusses the efficiency consequences of the price pooling arrangements in some detail.

4.4 Conclusions

As the preceding discussion indicates, there can be much debate about the precise level of assistance to the dairy industry. Some of the Commission's critics say it has overstated assistance, others that it has understated support.

However, three important messages emerge from the discussion:

- Under almost any acceptable measurement approach, assistance to milk production is considerably higher than that provided to most other activities. This assistance imposes a considerable burden on consumers of milk and dairy products.
- Assistance to market milk production is much higher than assistance to manufacturing milk production.

- As in other industries, summary assistance estimates do not provide an accurate guide to the precise efficiency costs of the current arrangements. These are a reflection not only of the price distortions underpinning the assistance estimates, but also of the supply and demand responses to those distortions, the linkages between the various segments of the industry, and inefficiencies associated with market milk quotas and the restrictions on interstate trade in milk. Estimating the size of these resource efficiency costs requires more sophisticated analysis.

More generally, in assessing whether the benefits of the current arrangements outweigh the costs, the precise magnitude of the costs is unlikely to be critical. As discussed in the following chapter, unless there are significant market failure or social reasons for supporting the dairy industry, then the presumption must be that the benefits — whatever their magnitude — are less than the costs.

5 SHOULD THE CURRENT ARRANGEMENTS CONTINUE?

In June 2000, Commonwealth levy arrangements for the dairy industry across Australia will end. Those arrangements have provided predictable but declining support for manufacturing milk production for over a decade, and have encouraged extensive industry restructuring. Reforms in the market milk sector beyond the farm-gate are also in train, reflecting the view that there is no longer a useful role for government to interfere with competitive market processes for this sort of product.

But the reform process has not yet extended to regulations governing the supply of market milk and pricing up to the farm-gate. These regulations underpin marketing arrangements that are complex, prescriptive and provide substantial assistance to dairy farmers. Indeed, as set out in chapter 4, while assistance provided to most other activities (including manufacturing milk) has fallen in recent years, assistance to market milk has increased. This outcome is the direct result of state government market milk controls.

Thus the key issue for this inquiry is whether the New South Wales market milk controls provide benefits that would warrant continuing special assistance treatment for the state's dairy farmers.

5.1 Potential benefits of the New South Wales market milk controls

The current arrangements benefit dairy farmers by restricting competition which would otherwise see farm-gate prices for market milk reduced to levels more closely reflecting the industry's costs of production.

A central principle of the Competition Principles Agreement is that such restrictions on competition are only justified when they provide more than offsetting public benefits for the community. In this regard, dairy interests have put forward several reasons to support the continuation of current arrangements:

- ensuring continuity of supply of quality fresh milk at stable prices;
- offsetting the market power of dairy processors and retailers;
- providing a bulwark against the vagaries of 'corrupt' world markets; and
- supporting regional economies.

Continuity of supply and stable pricing

While milk and other dairy products have an important dietary role, their consumption and production are governed by the same forces that apply to other foodstuffs. The prices of vegetables and meat — which may also be viewed as ‘essential’ foodstuffs — fluctuate according to seasonal availability, unforeseen climatic events and the like. In response to these fluctuations, many consumers adjust their purchasing behaviour — for example, purchasing more of those vegetables which are in season. Some consumers, however, are prepared to pay higher prices to secure particular items out-of-season. Such price premiums ensure that most commodities are available all year round.

Were the current farm-gate arrangements for market milk to be abolished, fresh milk prices would most likely show some seasonal variation. As for other food staples, variation in prices, rather than regulation, would be the mechanism for ensuring year round availability of milk.

But why price variation should be a problem for consumers is unclear, particularly as *average* milk prices over the whole year would be considerably lower than at present (see below). Further, the fact that farmers are prepared to pay for quota to supply market milk out of season, implies that prices *at all times of the year* would be lower than the current regulated price (see box 5.3). More generally, an extreme extension of the proposition that consumers prefer stable but much higher milk prices would be that they would prefer that retailers did not offer specials on any staple grocery lines.

Those consumers not prepared to pay the higher prices which might prevail at particular times of the year would have the choice of substitutes for fresh milk, such as UHT milk. And in the unlikely event that significant numbers of consumers resented price fluctuations, retailers could take action to smooth prices by, for example, entering into voluntary price averaging, contracts with processors. The key point would be, however, that price stability would be achieved at lower average price levels.

Providing countervailing power against powerful buyers

The dairy industry argues that concentration in the retail (and dairy processing) sectors means that farmers must deal with large powerful buyers. They go on to contend that, in the absence of regulated price setting, they could be forced to accept prices below those necessary to provide a reasonable rate of return. Hence, farmers argue that regulated price-setting by state governments provides them with some *de facto* ‘countervailing power’.

The need to give farmers countervailing power has been a common, and superficially appealing, argument in many areas of agriculture.

However, on closer examination, the extent of such problems is usually greatly overstated. This is certainly the case in dairying.

For a start, the major players in both milk processing and the manufacturing of dairy products are cooperatives owned by farmers. Cooperative structures greatly reduce concerns about the exercise of countervailing power at the processing/manufacturing stage. They also provide countervailing power to farmers in dealings with retailers.

The Commission notes concerns about concentration in the retail grocery industry, where three corporate chains — Woolworths, Coles and Franklins — hold just over 75 per cent of the market. (The independents, Davids and Foodland, account for most of the remainder.)

But such levels of concentration do not preclude vigorous competition in the industry at both the retailing and purchasing levels. This is particularly the case given that there are no explicit barriers that would prevent the entry of new firms were existing retailers earning excessive profits. Indeed, it is significant that the Australian Competition and Consumer Commission (ACCC) has not opposed several recent mergers in grocery retailing. Competition between retailers to ensure that they have adequate milk supplies to meet consumer demand will constrain them from squeezing margins to farmers unfairly.

Moreover, were retailers to exercise undue market power, processors on behalf of farmers would have the option of diverting milk supplies to the export market. While Australia exports little liquid milk (although some air-freighted trade between Western Australia and Singapore suggests there is potential), it is a significant exporter of dairy products. This in turn implies that farmers should always be able to earn at least export parity price on their milk production. In the Commission's view, this constitutes a sufficient and efficient return. It also suggests that dairy farmers are less at risk from the exercise of market power than producers of non-export commodities.

In any event, there are general sanctions in the Trade Practices Act against the misuse of market power. It is true that in the chicken meat industry the ACCC has recently augmented these general sanctions through authorisation of an industry-specific collective pricing mechanism (see box 5.1). However, this

Box 5.1: Countervailing power and chicken meat

The ACCC recently authorised a five year arrangement which enables Inghams Enterprises Pty Ltd to negotiate a collective growing agreement with its contract chicken growers (ACCC 1997). This provides for a standard fee for contract growers in each growing cycle, based on a 'model farm' concept (with the actual fee depending on the efficiency of the grower relative to other contract growers).

This collective agreement could be seen as consistent with the countervailing power argument for maintaining the current New South Wales market milk arrangements.

But there are some differences in the nature of the chicken meat and dairy industries and between the authorised agreement and the New South Wales dairy arrangements. This means that it is inappropriate to draw parallels between the two situations.

In contrast to dairy farmers, who own the animals and other inputs and control production until milk leaves the farm, contract chicken growers have a much more limited role. They provide the land, sheds, litter, management and labour to 'grow' chickens. However, the breeding of chicks (and the choice of breeding stock), feed, medication and technical advice are provided by Inghams. In essence, the 'growing' function is simply contracted out.

More importantly, the ACCC authorised the chicken meat arrangement as an interim, rather than an ongoing measure to ease adjustment towards industry deregulation.

It noted that, in establishing agreement over prices, the arrangement could lead to a number of anti-competitive outcomes, such as: limiting the ability of chicken growers to switch from one processor to another; reducing the likelihood of further entry into the growing and processing markets; and increasing the possibility of collusive anti-competitive behaviour.

However, the ACCC saw public benefit in sanctioning an interim arrangement on the grounds that deregulation was unlikely to occur unless there was a mechanism in place to 'protect' growers in the transition stage. It also noted that its concerns about the potentially anti-competitive effects of the arrangement were (partly) alleviated by the existence of termination clauses, a company code of practice and by the ability of growers to negotiate individually with Inghams if they did not wish to be part of the collective process. This is in stark contrast to the compulsory nature of the New South Wales market milk arrangements.

In the longer term, the ACCC made it clear that fees and negotiations should be handled on a company-specific basis. Accordingly, in granting the authorisation, it attached the proviso that the industry demonstrate a clear commitment and movement towards operating in a deregulated market.

(temporary) arrangement cannot possibly be construed as providing in-principle support for the current New South Wales market milk controls:

- The key rationale for the authorisation is to provide a clear, pre-determined *transition to a deregulated environment*. The ACCC pointed to the benefits from deregulation in the chicken meat industry and noted that the proposed arrangement was potentially anti-competitive. However, it judged that, without interim protection for contract chicken growers, the South Australian Government was unlikely to deregulate, thereby denying consumers longer term gains.
- The ACCC noted that the anti-competitive effects of the arrangement were ameliorated by the *lack of compulsion for chicken growers to take part*. This is in stark contrast to the compulsory nature of the current New South Wales market milk arrangements.

Reliance on the general provisions in the Trade Practices Act to deal with any misuse of market power in the dairy industry would have the advantage of subjecting the industry to the same tests as are applied to other activities.

A bulwark against corrupt world markets

As the Issues Paper for this review makes clear, world dairy markets are corrupted by assistance provided by overseas governments. This assistance hinders market access for Australian dairy exports and reduces export prices.

However, as noted in chapter 4, unless such assistance is a temporary aberration, it is not a reason for Australian governments to take matching action.

In fact, assistance to the dairy industry overseas has been longstanding and will continue in the future, albeit at gradually reducing levels. This impediment to the efficient functioning of world dairy markets is therefore beyond Australia's control.

As a small country, it makes little economic sense for Australia to try and counter this impediment by providing offsetting assistance to the local industry. Applied across-the-board, this approach would be financially unsustainable. A better policy on the domestic front is to take such overseas impediments as given and use our resources to the best possible advantage in the constrained environment. But at the same time, Australia can join with other countries who are adversely affected by overseas subsidies and push for reforms in multilateral trade negotiations. This approach has already had some successes. Reductions in foreign subsidies agreed to in the last round of the

GATT are one factor contributing to an improved outlook for dairy export prices (see chapter 2).

Supporting regional economies

Some would argue that supporting regional economies rather than improving efficiency is the main justification for retaining the current market milk controls. Implicit in this argument is the view that an across-the-board tax on fresh milk to subsidise dairy farmers' incomes is an effective way of helping 'needy' regions.

The New South Wales' controls have had two types of regional impact. First they have boosted farm incomes in the dairying regions. Second, restrictions attaching to the quota system used to support inflated market milk prices have almost certainly led to some redistribution of dairy production within the state (see section 5.2).

Some regions will have benefited from both higher prices and greater production. In others, the benefits of higher prices may have been offset by reduced levels of production. Moreover, by raising dairy farmers' incomes, the current controls will almost certainly have raised the price of farm land. This will have penalised other rural activities in these regions.

This in turn suggests that the current arrangements are an imprecise and uncertain way of helping less affluent regions. There is also the more general problem that there is no explicit link between the benefits provided to individual dairy regions and the economic health of those regions.

Thus, as discussed below, if there were a case for special government support for some dairy regions, this would be better pursued explicitly rather than through a general, and therefore non-targeted, subsidy to milk production.

5.2 The costs of the New South Wales controls

In aggregate terms, the New South Wales market milk arrangements mainly involve boosting farmers' incomes by taxing consumers. However, the arrangements have almost certainly led to changes in the level and location of production within the state, with associated efficiency costs. Moreover, the interaction of the New South Wales and like arrangements in other states has undoubtedly led to a less efficient distribution of dairying activity across Australia. This has increased the cost of meeting Australia's overall milk requirements.

Higher prices for consumers

There can be little doubt that abolition of New South Wales farm-gate controls would see retail prices for market milk fall significantly (although there is inevitably some uncertainty about the precise magnitude of that reduction).

The Commission's assistance estimates in the previous chapter imply an average decline of as much as 21 cents per litre in retail prices. This assumes that in an unregulated market, farm-gate prices for market milk would fall to the farm-gate manufacturing milk price, plus a small margin reflecting the costs of out-of-season supply.

However, the Commission's price distortion estimates include the levy on farmers used to subsidise manufacturing milk production. This levy will remain in place until 2000 even if the state market milk controls were abolished before then. In these circumstances, the likely reduction in retail prices would be reduced by the amount of the levy. (Thus, for 1995–96 when the levy was 1.9 cents per litre, the implied reduction in retail prices would have been around 19 cents per litre.) But the Commission emphasises that this factor will only be relevant if the New South Wales controls are abolished before 2000.

Price reductions of the order of 20 cents per litre are hotly contested by the dairy industry. They claim that while deregulation would significantly reduce prices paid to farmers, retail prices would not fall much and could even increase. In support of this view they:

- contend that there would be an increase in transport, processing and retailing margins;
- draw parallels to retail price increases which apparently followed the abolition of post farm-gate controls in other parts of Australia; and
- point to rises in the retail price of fresh milk in New Zealand following deregulation.

But none of these arguments are reason to be pessimistic about the retail price benefits from deregulation of the New South Wales farm-gate controls.

The Commission considers it highly unlikely that there would be any significant increases in transport, processing and retailing margins accompanying deregulation at the farm-gate level. The same contention was raised prior to deregulation in the New South Wales egg industry. But, as discussed in box 5.2, price falls averaging over 30cents per dozen following deregulation were broadly consistent with those implied by the Commission's assistance estimates. Moreover, retailing margins fell in the year following deregulation.

Box 5.2: The price of eggs

Deregulation of the New South Wales egg industry in July 1989 brought to an end a system of controls which had been in place in various forms since 1928.

During the debate leading up to deregulation, some argued that the changes would lead to increases in processing and handling margins, thereby reducing the benefits to consumers. As noted in the text, there is currently a similar argument in the dairy industry.

As it transpired, the retail price of eggs fell significantly after deregulation. For example, the price of 55 gram shell eggs fell overnight from \$2.00 to \$1.68 per dozen and for 1989-90 fluctuated around an average price of \$1.66 per dozen. Consumers gained about \$27 million from these changes in 1989-90. The following year the retail price fell to an average of \$1.54 per dozen, benefiting consumers to the tune of \$35 million compared to the last year of regulation. These retail price outcomes were broadly consistent with the Commission's nominal assistance and price distortion estimates just prior to deregulation.

Moreover, the wholesaling/retailing margin fell from an estimated 59 cents per dozen to 51 cents per dozen during 1989-90. While it subsequently rose to an estimated 65 cents per dozen in 1990-91, the Industry Commission pointed to limitations in the weight-based producer price data used to calculate these figures. It suggested that were it possible to allow for reductions in the average weight of eggs supplied to the market following deregulation, estimated margins would have been lower.

Source: IC (1991e), using information supplied by NSW Agriculture and Fisheries

Indeed, it is hard to see why controls up to the farm-gate should have any impact on post farm-gate margins. Any squeeze on margins would presumably come from regulatory arrangements beyond the farm-gate (see below). And even if farm-gate deregulation 'allowed' some increases in charges for transporting milk from farm to processing plants, the overall impact on retail prices would be negligible. According to the ADC, these charges currently average about 2.7 cents per litre in New South Wales. Thus, even an extreme 50 per cent increase in charges would raise retail prices by only just over one cent per litre.

The Commission notes the suggestion that post farm-gate deregulation in other states has led to some increase in retail prices. But if previous regulations unduly squeezed post farm-gate margins, this is hardly surprising. It suggests that under previous regulatory regimes, the upstream sectors of the industry as well as consumers contributed to dairy farmers' incomes.

Such a squeeze on margins would also have had adverse consequences for the quality of processing and retailing services. For example, it may have reduced processors' capacity to invest in new equipment, innovate or develop new markets. (In this regard, a recent paper by the Dairy Research and Development Corporation (Greenwood 1996) discusses the challenges for the industry to expand processing capacity and develop new markets and brands.)

But more importantly in the context of this review, it is clearly inappropriate to extrapolate experiences with post farm-gate deregulation to likely outcomes from the abolition of the farm-gate controls. As noted above, the only margins that might conceivably rise as a result of deregulation at the farm-gate level would be transport costs from farm to processor. And any such rises would add little to retail milk prices. From this perspective, abolition of the New South Wales farm-gate controls would provide an important counter to any increase in retail prices resulting from deregulation post farm-gate in July next year.

As regards the experience with deregulation in New Zealand, prices paid to farmers for milk are determined under commercial contracts. While this makes it difficult to get detailed and consistent price information, the Commission understands that prices do not vary greatly according to the end use of that milk. Similarity in prices for market and manufacturing milk is the outcome which the Commission would expect were the New South Wales farm-gate controls abolished, and is the reason the Commission would expect to see a significant drop in the retail price of market milk. It is true that the retail price of market milk rose slightly following deregulation in New Zealand. However, the deregulatory package involved changes in the arrangements beyond the farm-gate which may well have contributed to this outcome. In this regard, there may be a parallel with the effect of post farm-gate deregulation elsewhere in Australia discussed above.

Evidence from quota prices

Further support for the Commission's view that abolition of the New South Wales farm-gate controls would lead to reductions in retail milk prices of around 20 cents per litre is provided by quota prices.

Over the past 12 months, the price of quota — that is, the price paid to purchase the right to supply a litre of market milk in a particular four-week period — averaged 56cents per litre (see table3.2). As quota can be used 'in perpetuity' (it attaches to the same four-week quota period every year), its value to the farmer in a one-off use can be obtained by discounting the purchase price. In turn, this one-off value provides an indication of the price raising effects of the current controls.

Using a ‘typical’ discount rate of 10 per cent, the imputed value in one-off use would be just 5.6 cents per litre. Put another way, this would suggest that current arrangements are inflating prices by as little as five to six cents per litre.

However, given ongoing uncertainty about the future of the quota arrangements, a 10 per cent discount rate is clearly very conservative. In fact, the New South Wales Dairy Farmers Association has advised farmers contemplating the purchase of quota to offer prices that will allow them to recoup their capital outlay in 2 to 2.5 years ‘to be on the conservative side’ (New South Wales Dairy Corporation 1997c). For an average quota price of 56 cents per litre, the implied discount rate of around 40 per cent would give a value of quota in one-off use of about 22 cents — slightly more than the Commission’s estimate of the price raising effects of the current controls.

In the Commission’s view, a 40 per cent discount rate is probably excessive, with a rate of around 25 per cent perhaps being more appropriate. As the analysis in box 5.3 indicates, a 25 per cent discount rate is consistent with the 5 cents per litre premium for assuring year round milk supply incorporated in the Commission’s assistance estimates.

With a 25 per cent discount rate, the implied value of quota in one-off use would be 14 cents per litre, (or nearly 16 cents in the absence of the levy on farmers to assist manufacturing milk production). Again, this is not dramatically different from the price reductions implied by the Commission’s assistance estimates.

Moreover, there are a number of reasons why estimates based on current quota prices might understate the price raising impacts of the current market milk controls. For example:

- The New South Wales Dairy Corporation only accepts about 88 per cent of milk for which quota is held. Milk not accepted by the Corporation must be sold at the much lower manufacturing milk price, thereby reducing the average per litre value of the quota to the farmer. In addition, there are penalties for underproduction against quota holdings. This encourages farmers to produce in excess of quota requirements as ‘insurance’. This implies a further reduction in the value of the quota to farmers.
- As set out in chapter 3, the quota system is complex and gives the Corporation considerable administrative discretion. This is likely to discourage some trade and lead to discounting of quota prices to reflect transactions costs (and perhaps the risk of unfavourable decisions).

Box 5.3 Quota prices and the premium for assuring out-of-season supply

As set out in chapter 3, quota prices over the past year ranged from 36.9 cents per litre for June/July quota to 77.3 cents per litre for October quota, (averaging 56.3 cents per litre over the whole year).

Given that farm-gate prices paid to farmers are not linked to seasonal costs of supply, these differences in quota prices largely reflect different costs of milk production at particular times of the year.

It is possible to use these price differences to obtain an approximation of the year-round average cost of assuring out-of-season supply. This involves comparing the (discounted) year-round average quota price — a reflection of average production costs over the year — with the (discounted) peak quota value — the value when production costs are at their lowest.

With a discount rate of 10 per cent, the implied price premium for assuring out-of-season supply is just 2.1 cents per litre (7.7 cents less 5.6 cents). In contrast, a 40 per cent discount rate would imply a year round average premium of about 8 cents.

The out-of-season premium in the Commission's assistance estimates is currently about 5 cents per litre. A 21 cent difference between the peak quota value and the year-round average quota price would equate to a 5 cent premium in one-off use if the discount rate was 25 per cent.

Moreover, the difference between the highest and lowest values for quota at different times of the year gives a rough indication of the likely magnitude of the fluctuations in retail prices that could result from deregulation of the farm-gate controls:

- Using a 25 per cent discount rate and the 40 cent per litre difference in quota prices across the year (see table 3.2), the implied retail price variation is around 10 cents per litre.
- Using the same discount rate and the 60 cent per litre difference in quota prices observed at some individual quota exchanges, the implied price fluctuation is 15 cents per litre.

Given an average price fall of 20 cents per litre over the whole year, these calculations lend further support to the view that deregulation of the farm-gate controls would lead to lower retail prices, even at those times of the year when production costs are at their highest.

- The absence of arrangements to permit short-term leasing of quota, together with controls on the movement of quota between farms and regions and on who can buy quota, reduces the capacity of farmers to meet market milk needs at the lowest cost. Again, this will be reflected in a lower market value for quota.

All up, the Commission has little doubt that deregulation of the New South farm-gate controls would lead to substantial falls in retail milk prices. Even if not as large as the assistance estimates imply, the savings to consumers would still be significant. At current consumption levels, every 5 cent fall in retail prices would save New South Wales' consumers around \$30 million a year.

Indeed, were a substantial price fall not the inevitable outcome, there would be little need for the regulations constraining interstate trade in market milk. Such regulations are explicitly designed to prevent arbitrage reducing market milk returns much closer to manufacturing milk levels. Perhaps reflecting this point and the possibility of future deregulation, the New South Wales Dairy Farmers Association advises anyone investing in the industry to prepare their figures using the manufacturing milk price 'so anything above this is a bonus' (New South Wales Dairy Corporation 1997b).

Efficiency costs

The current New South Wales farm-gate controls have both consumption and production efficiency costs.

As set out in chapter 3, the resultant higher retail prices reduce milk consumption by around 20 million litres each year. In combination with a price increase of 20 cents litre, this would imply a consumption efficiency cost of around \$2million per year.

The production efficiency costs, though likely to be more significant, are also more difficult to quantify.

As noted earlier, in the quota states, Commonwealth support for manufacturing milk, rather than the state market milk controls, provides the incentives for greater milk production. The primary effect of the quota system on the production side is to reallocate milk between the manufacturing and fresh milk markets.

Given the absence of significant incentives for increased total milk production, it might be argued that the New South Wales controls have few production efficiency costs.

In theory, a quota system could be designed to deliver the current transfers from consumers to producers without accompanying production efficiency

costs. Features of such a 'costless' system would include unrestricted transferability of quota and provisions for one-off leasing as well as permanent sale. With such a system in place, quota would gravitate to those farmers able to meet market milk requirements at the lowest cost. The introduction of quota trading in 1990 has helped to move the New South Wales system towards this outcome. As discussed in chapter 2, the relocation of production following the introduction of quota trading has almost certainly been an important contributor to the marked improvement in milk yields in recent years.

However, as discussed earlier, there are still a number of inflexibilities and restrictions in the quota system which are likely to prevent market milk requirements being met at least cost. These include caveats on transfer of quota between farms and regions and the absence of a facility for one-off leasing of milk quota. The quota system also entails administrative costs.

For this submission, the Commission was not able to assess the magnitude of these production efficiency costs. Suffice it to say that if modelling commissioned by this review suggests that deregulation will precipitate significant regional shifts in farming or processing activity within New South Wales, this would be an indication that the current arrangements do have substantial production efficiency costs.

The interstate dimension

Moreover, by contributing to an inappropriate distribution of milk production across Australia, the New South Wales controls have wider production efficiency costs.

As in other states, market milk activity in New South Wales essentially involves production and consumption within the state. So even if production patterns within the state were fully efficient, there could still be a significant cost to Australia as a whole if New South Wales is a more or less efficient dairy producer than, say, Victoria. Prima facie, it would be surprising if the most efficient outcome for Australia was for each state to meet 100 per cent of its market milk requirements.

There are many who argue that deregulation would not result in significant interstate trade in market milk, implying that the efficiency costs of the current state-based production configuration are relatively small. This conclusion is based on the natural protection provided by transport costs and the presence in each state of sufficient low cost producers to meet local market milk needs.

But others contend that, in a deregulated market, exports of market milk from Victoria to New South Wales, and perhaps from New South Wales to Queensland, could be significant. Ultimately, only a market test provided by deregulation will conclusively resolve the debate on the significance of the costs associated with the current restrictions on interstate trade.

Setting the benefits against the costs

At a time when assistance to most industries is falling, it is extremely difficult to argue that dairying ought to be treated differently. The efficiency arguments for continuation of the New South Wales market milk arrangements are weak, and could equally apply to other industries in receipt of much less government support. And, while the Commission accepts that the arrangements provide some regional benefits, their net impact in this regard is uncertain. Moreover, the benefit is linked to the level of milk production rather than to the ‘need’ of the region concerned. In the Commission’s view, underlying regional (or social) concerns would be best targeted directly, rather than by persisting with an across-the-board tax on milk consumers. (Social and regional adjustment issues are considered in more detail below.)

On the other side of the ledger, the costs to consumers are high and efficient resource use is compromised. Uncertainty about the magnitude of these efficiency costs is not to downplay their significance. It is also inappropriate to argue that the controls are a means of transferring income from consumers to dairy farmers without incurring significant efficiency costs. Even if a tax on milk is an efficient way of raising revenue, there is no prima facie reason why that revenue should be used to boost dairy farmers’ incomes.

Thus, the Commission considers that New South Wales should abolish its farm-gate controls on the supply and pricing of market milk. The Commission notes that changes to the farm-gate arrangements need have no implications for the health and safety and quality assurance functions for market milk currently undertaken by the New South Wales Dairy Corporation. While these functions are also under review, they are entirely separable from the farm-gate controls.

In any event, if Victoria deregulates its market milk sector, then preserving the current farm-gate arrangements in New South Wales may be futile. This highlights the need for the review to look beyond the New South Wales arrangements. To reinforce this point, deregulation of the industry in Queensland could provide new opportunities to farmers in the north of New South Wales.

5.3 How to deregulate

While social and regional impacts are not a reason to forgo reforms that benefit the community as a whole, policy changes can be introduced in a way that ameliorates those impacts. As discussed above, in the context of this review, the two key adjustment impacts are likely to be:

- some redistribution of dairy production within the state, and
- capital losses for dairy farmers resulting from the abolition of quotas.

Often adjustment difficulties can be mitigated by introducing reforms gradually. In this case, the gradual approach could involve:

- progressive reductions in the regulated farm-gate price for market milk until such time as the regulated price fell below the unregulated market price. (An alternative, though more cumbersome, arrangement would be to progressively increase market milk quotas until the quota exceeded the unregulated level of market demand); and/or
- giving the industry notice that the market milk controls will end on a particular date, thereby providing producers with a period of grace to plan for the changed market environment.

Either approach would give farmers several more years to benefit from inflated market milk prices (albeit at a diminishing rate under the first approach).

Adjustment issues

A gradual phase-out of the quota system, or a period of grace before deregulation, might well be seen as sufficient adjustment assistance for an industry which has benefited for many years at consumers' expense. A continuation of the productivity gains achieved in recent years would help the industry to cope with the abolition of the current controls. In addition, the Commission notes that, in the past couple of years, the volume of quota trade has been relatively small. This suggests that the number of farmers at risk from sustaining major capital losses on recently acquired quota is also small.

Moreover, farmers and their employees would have access to generally available adjustment measures. For example, there are labour market programs designed to provide those losing jobs with the skills necessary to find alternative employment.

A further consideration militating against specific adjustment assistance is that it could create expectations that other industries facing the prospect of significant change will be treated similarly. In this wider context, horse

trading over specific adjustment assistance can become a barrier to progressing worthwhile reforms.

Nevertheless, there may be a case for considering more specific adjustment support if the modelling commissioned by the review indicates the possibility of severe regional impacts.

In deregulating this industry, it would be possible to assist farmers through some form of quota buy-back scheme. In fact, a buy-back scheme could allow for almost immediate deregulation and therefore be an alternative to the phased approaches discussed above.

However, this approach could be expensive. More importantly, it would provide the same rate of compensation to farmers who have reaped the benefits of higher market milk prices for many years as to those who have only recently purchased quota.

Further, a quota buy-back scheme would be an imprecise way of dealing with any significant adverse impacts in particular regions. As noted earlier, in some regions there would be falls in production as well as in prices. In others, increases in production would at least partly offset reduced prices. This suggests that, if the New South Wales Government wished to provide specific adjustment assistance to dairy farmers, targeting that assistance to particular regions would be preferable to an across-the-board buy-back scheme.

APPENDIX A

Copy of letter received on 20 May 1997 from the New South Wales Dairy Industry Review Group:

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Mr Bill Scales
Chairman
Industry Commission
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Dear Mr Scales

In accordance with the National Competition Principles Agreement, the NSW Government has commenced a review of the *NSW Dairy Industry Act 1979*. The Review Group is being chaired by Mr Don Hayman and includes representatives from the NSW Dairy Corporation, NSW Dairy Industry Conference, NSW Dairy Farmers' Association, The Cabinet Office, NSW Treasury and NSW Agriculture.

An Issues Paper has been completed outlining the anticompetitive aspects of the legislation establishing the NSW Dairy Corporation and the NSW Dairy Industry Conference, and submissions are being sought from the public. A copy of the Issues Paper is attached. Due to your continued involvement in the calculation of assistance measures to the dairy industry, I would like to invite the Industry Commission to participate in this review by tendering a submission to the Review Group including the Industry Commission's methodology and findings regarding assistance to the Dairy Industry at both the National and State level, and to present this submission to the Review Group.

Submissions close on Friday 27 June. A special meeting of the Review Group on Thursday July 10 has been designated for invited industry bodies to make

presentations of their submissions. I would greatly appreciate the Commission's attendance and participation at this meeting and look forward to receiving the Commission's submission.

Yours sincerely

Don Hayman
Executive Director
Policy, Planning and Technology

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